March 27, 2012
Launch Announcement:

Canadian Physical Activity Guidelines for the Early Years (aged 0-4 years)
Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years)

Children four and under should move more, sit less and avoid screens

The Canadian Society for Exercise Physiology (CSEP) and ParticipACTION, with support from the Children’s Hospital of Eastern Ontario Research Institute, Healthy Active Living and Obesity Group (CHEO-HALO) have launched new Guidelines for the Early Years.

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Canadian Physical Activity and Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years) – Background and Rationale

Physical Activity

Even though the early years are a critical period for the development of healthy living behaviours, we have yet to synthesize the evidence to suggest minimal and optimal amounts of physical activity needed. The health benefits of physical activity for school-aged children are well established; however there is a gap in this knowledge for the early years. In 2010, the World Health Organization estimated that more than 42 million children under the age of 5 years were overweight worldwide and that young children engage in low levels of physical activity and very high levels of sedentary time.

Until recently, only one set of physical activity guidelines was available for children under the age of 5 years; these were from the National Association for Sport and Physical Education in the USA. These guidelines were useful recommendations for parents and caregivers with advice on healthy living, but were informed largely on expert consensus and not by the rigor of a systematic review. Australia and the United Kingdom (UK) recently released evidence-based guidelines, which recommend that preschoolers be physically active for at least 180 minutes per day, Unfortunately, the scientific reviews used to inform those guidelines have not been published, and so the nature of the relationship between physical activity and health during the early years remains unclear.

In Canada, the demand for guidance on physical activity for the early years is clearly evident from a foundation paper by Timmons et al. published in Applied Physiology, Nutrition and Metabolism (APNM) in 2007. Based on journal access records, the preschool paper was downloaded 2-5 times more frequently (nearly 6,000 downloads) than other foundation papers used to inform updated guidelines for school-aged children, youth, adults, and older adults. Further, stakeholder consultations by the Canadian Society for Exercise Physiology and the Public Health Agency of Canada conducted in 2010 revealed a strong demand for physical activity guidelines for the early years. In March of 2011, we embarked on a rigorous and transparent process of guideline development following the Guideline Development Framework explained in detail by Tremblay and Haskell.

Sedentary Behaviour

In Canada, the demand for guidance on sedentary behaviour has been apparent through various stakeholder consultations by the Canadian Society for Exercise Physiology and the Public Health Agency of Canada. Further, when the Canadian Sedentary Behaviour Guidelines for Children and Youth were released in February 2011, we saw increased demand for sedentary behaviour guidelines for other age groups. In March of 2011, we embarked on a rigorous and transparent process of guideline development following the framework explained in detail by Tremblay and Haskell.

Separate and distinct from lack of moderate- to vigorous-intensity physical activity (i.e., not meeting specified physical activity guidelines), sedentary behaviour is defined as any waking behaviour characterized by an energy expenditure ≤1.5 METs while in a sitting or reclining posture. Although people have generally thought that young children were inherently active enough, accumulating evidence suggests that sedentary lifestyles are occurring in the early years. For example, it’s been reported that children in the early years spend 73-84% of their waking hours being sedentary. Furthermore, most young children engage in more than 1 hour per day of screen-time and are being exposed to screen-based activities before the age of 2 years.
Until recently, there has been little guidance on sedentary behaviour thresholds associated with healthy growth and development. Sedentary behaviour guidelines for young children were recently released as part of new physical activity guidelines in Australia and the U.K. Though the U.K. identified no specific cut-point for sedentary behaviour, guidelines from Australia state that screen time is not appropriate for those under 2 years of age, and should be limited to less than 1 hour per day for those aged 2-5 years. Similarly, the American Academy of Pediatrics discourages electronic media use in children under 2 years of age and that it should be limited to less than 2 hours of quality educational screen time per day for children older than 2 years. Finally, recommendations from the Canadian Pediatric Society state that television viewing should be limited to 1 to 2 hours per day for children of all ages. However, to date, recommendations on appropriate levels of sedentary behaviour have not been informed by a systematic review that focuses specifically on sedentary behaviour.

Questions & Answers

How are the Canadian Sedentary Behaviour Guidelines different from the Canadian Physical Activity Guidelines?
It is important to get the recommended physical activity per day, but the other hours of the day that aren’t spent being physically active are just as important. Very few children meet current physical activity guidelines, and most spend the majority of their remaining leisure time being sedentary. So while the Physical Activity Guidelines suggest minimum amounts of time that should be allotted to physical activity, the Sedentary Behaviour Guidelines suggest caps on sedentary time.

How do the new Canadian Physical Activity Guidelines for the Early Years compare to other physical activity guidelines for this age group in other countries?
As part of the development process we worked with stakeholders in other jurisdictions to try to harmonize the Canadian guidelines with the recommendations in the United Kingdom, Australia and the United States. The development of the Canadian guidelines followed a rigorous and transparent scientific process – based on a systematic review of the best available scientific evidence. The research that is the foundation of these guidelines has been submitted for publication in a peer-reviewed journal.

What would an ideal day look like for a child in his/her early years?
To improve health benefits, it is important to take a ‘whole day’ approach to healthy, active living. Ideally, parents and caregivers should help children of all ages replace their sedentary time (especially passive screen time) with activities that engage them and help them move. Children aged one
and under would be encouraged to reach and grasp, push and pull, and crawl. Children aged one to four would engage in at least 180 minutes of physical activity at any intensity throughout the day, including activities such as climbing stairs, playing outside and exploring the environment, running or dancing.

What are the health benefits of being an active young child?
Getting the recommended amounts of physical activity helps maintain a healthy body weight, improves movement skills, builds healthy hearts, develops self-confidence and improves learning and attention. The more daily physical activity children can get the greater health benefits they will receive, which far exceed the potential risks associated with physical activity.

Why do the guidelines suddenly jump down from three hours of physical activity recommended at age four, to just one hour at age five?
In the early years, a period of rapid growth and development, movement naturally happens at a variety of intensities and in short bursts, so children need at least 180 minutes to capture enough activity overall. Lower intensity activities are important for proper growth and development and higher intensity activities help promote good fitness, strong muscles/bones and healthy hearts.

As children age and are able to do more focused, sustained and sophisticated movements, they can move in a more intense and consistent manner, and can get enough heart-pumping activity in sixty minutes. That is why the guidelines advocate a progression towards 60 minutes of energetic play by age five, which is consistent with physical activity guidelines for children and youth.

What’s so bad about screen time?
Screen time means being sedentary which can have negative effects on children’s physical and mental development. Too much screen time is associated with unhealthy body weight, poor behaviour and learning skills. By spending less time being sedentary, you improve health outcomes.

What’s wrong with children sitting down to do crafts, read a favourite book or play a game?
These are all worthy activities, especially when this time is spent being engaged in learning or with parents, caregivers or peers. The Canadian Sedentary Behaviour Guidelines for the Early Years focus mainly on discretionary time and are meant to encourage active play and discourage prolonged periods of sitting and screen time. There is plenty of time allocated within the ‘whole day’ approach to enjoy some favourite sedentary activities.

Additional Resources for the Early Years’ Guidelines
Scientific Statements
Media release
Backgrounder
Pre-launch webinar
Glossary
Matte article
Clinical Practice Guidelines Development Reports (AGREE Reports)
Methodology papers published online in Applied Physiology, Nutrition, and Metabolism (APNM)